NOTE: The term *fleet angle* is defined in §94.33–10 of this chapter.

(v) *Rigid ladder.* A rigid ladder on a pilot hoist must have thermally insulated handholds and a padded backrest so that the person being raised or lowered may firmly brace himself or herself between the ladder and the backrest. The ladder must be at least 2.5 m (100 in.) long from the bottom rung to the top of the handholds.

(w) *Ladder rungs.* Each rigid ladder must have at least six rungs, each with a non-skid surface that does not retain water. Adhesive non-skid sheets may not be used. (For example, a suitable surface for a wooden rung is one that has grooves at least 3 mm (⅛ in.) deep cut in a diamond pattern so that water runs off the edge of the step. Non-skid grit is applied directly to the step surface.) The stepping surface of each rung must be not less than 115 mm (4½ in.) wide and not less than 400 mm (16 in.) long. The distance from the top of one rung to the top of the next must be uniform, between 300 mm (12 in.) and 350 mm (13¾ in.).

(x) *Platform railing.* A lift platform on a pilot hoist must be enclosed by a guardrail that has a diameter of between 30 millimeters (1¼ inches) and 75 millimeters (3 inches). The center of the guardrail must be at least 900 millimeters (3 feet) above the platform. At least one intermediate rail must be provided between the guardrail and the platform. Each rail must be set back from the edge of the platform at least 50 millimeters (2 inches). Each gate in the rails must have a latch that can keep the gate securely closed.

(y) *Platform floor.* The platform floor of a pilot hoist must have a non-skid surface and must be at least 750 millimeters (30 inches) by 750 millimeters, exclusive of the surface area of any hatch. Each hatch in the platform floor must be at least 750 millimeters (30 inches) by 750 millimeters. Each hatch must have a means to keep it securely positioned both when opened and closed.

(z) *Pilot ladder fittings.* The bottom of the rigid ladder or lift platform on a pilot hoist must have fittings to attach a pilot ladder of the type that meets the requirements of subpart 163.003 of this chapter. The fittings must be arranged so that—

(1) The distance between the top of the highest step on the pilot ladder and the surface of the lift platform or top of the bottom rung on the rigid ladder is between 300 and 350 millimeters (12 and 13¾ inches);

(2) The steps of the pilot ladder are directly below and in line with the steps of the rigid ladder or edge of the lift platform; and

(3) The pilot ladder can bear on the side of the vessel when in use.

(aa) *Emergency stop switch.* Each pilot hoist must have an emergency stop switch that can be operated by a person on the ladder or lift platform.

(bb) *Fasteners.* Each fastening device securing a part of a pilot hoist must have a means to prevent the device from loosening.

(cc) *Gears.* Each gear must be keyed to its shaft.

(dd) *Welding.* Each weld must be made using automatic welding equipment or be made by a welder who is qualified by the U.S. Coast Guard, U.S. Navy, American Bureau of Shipping, American Welding Society, American Society of Mechanical Engineers, or other organization that has similar procedures for welder qualifications that are acceptable to the Commandant.

§163.002–15 Performance.

(a) Each pilot hoist must have sufficient performance capability to pass the approval tests in §163.002–21.

(b) [Reserved]

§163.002–17 Instructions and marking.

(a) *Instruction plates or placards.* Each pilot hoist must have instructions that show its method of operation and lubrication of its working parts. The instructions must be on one or more corrosion-resistant plates, or must be weatherproof placards. The instructions must be attached to the hoist. Each instruction must be in English or must have understandable symbols or pictograms. The operator of the hoist must be able to see and read the operating instructions when operating the

hoist control lever. The lubricating instructions must state the recommended lubricants for the temperature range in which the hoist is designed to operate. The temperature range must be stated in both degrees Celsius and Fahrenheit.

(b) *Marking of controls.* Each control on a pilot hoist and each position of the control must be identified by a marking on the hoist.

(c) *Marking of gauges.* Each gauge on a pilot hoist must be marked with its normal operating range.

(d) *Manual.* Each pilot hoist must have a manual of installation instructions, operating instructions, maintenance and repair instructions, a lubrication chart, a parts list, a list of sources of repair parts, and a log for keeping maintenance records. Each manual must be in English.

§ 163.002–21 Approval tests.

(a) *General.* If a pilot hoist fails one of the tests in this section the cause of the failure must be identified and any needed design changes made. After a test failure and any design change, the failed test, and any other previously completed tests affected by the change, must be rerun.

(b) *Visual examination.* Before starting the tests described in this section an assembled pilot hoist is examined for evidence of noncompliance with the requirements in §§ 163.002–11 and 163.002–13.

(c) The following approval tests must be conducted:

(1) *Rung strength.* If the pilot hoist has a rigid ladder a static load of 900 kilograms (2000 pounds) is applied to the center of a ladder rung for one minute. The load must be uniformly distributed over a 100 millimeter (4 inch) wide contact surface. The test must be repeated using a second ladder rung. The rungs must not break or crack during these tests.

(2) *Platform strength.* If the pilot hoist has a lift platform, the platform is lifted to a level where it is supported only by its suspension components. A static load of 900 kilograms (2000 pounds) is then applied to the center of the platform for one minute. The load must be uniformly distributed over a 100 millimeter (4 inch) square contact surface. The test must be repeated enough additional times so that the load is placed in the center of each hatch cover when in its closed position, and in the center of each area of the platform located between floor supports. The platform must not break or crack during these tests.

(3) *Deck interlock.* If the pilot hoist is portable, it is placed in an uninstalled position. Its hoist control lever is then activated. The deck interlock must prevent movement of the ladder or lift platform when the lever is activated.

(4) *Lifting and lowering speed and level wind.* The hoist is installed in a level operating position and a weight equal to the weight of the pilot ladder plus 150 kg (330 lb.) times the maximum persons capacity of the hoist is placed on its ladder or lift platform. The ladder or lift platform is repeatedly raised and lowered under power operation until a total distance of at least 150 meters (500 feet) has been traversed. The ladder or lift platform is raised and lowered each time through a distance of at least 5 meters (16 feet). The average speed of raising the ladder or lift platform and the average lowering speed during this test must both be between 15 and 21 meters per minute (50 and 70 feet per minute). During the test, each suspension cable must have one level wind of wrap each time it is rewound onto its drum.

(5) *Upper position stop.* The hoist is installed in a level operating position and a weight equal to the weight of the pilot ladder plus 150 kg (330 lb.) times the maximum persons capacity is attached to the hoist. The hoist must be able to raise the weight to the upper limit of travel of the ladder or lift platform and must be able to stop at the upper limit without jarring, jerking, or damage. The test is repeated with no weight on the ladder or lift platform.

(6) *Cable securing device.* If the hoist has suspension cables, it is installed in a level operating position and the cables are run all the way out. A weight equal to 2.2 times the working load is then attached to the cables. The cables must remain securely attached to the drums for at least one minute after the weight has been attached.

(7) *Controls and power indicator.* The hoist is installed in a level operating